REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-23 and 25 are presently active; Claims 1-23 having been amended, Claim 24 having been canceled without prejudice, and Claim 25 having been added by the present amendment.

In the outstanding Office Action, the specification was objected due to informalities. Figures 1-9 were objected to. Claims 6, 7 and 12-24 were objected to due to improper format. Claims 1-24 were rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written requirement. Claims 1 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida et al (U.S. Pat. No. 6,282,233) in view of Monogioudis et al (U.S. Pat. No. 5,550,810). Claims 2-7 and 9-24 were objected to for being dependent from a rejected base claim but would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims.

Regarding the objection to the specification, the specification has been amended as suggested in the outstanding Office Action. Thus, it is respectfully submitted that the objection to the specification has been overcome.

Regarding the objection to the drawings, on the replacement sheets, Figures 1-3 have been labeled with --Background Art--, and Figures 1-9 have been corrected to add labels to the functional blocks. Thus, it is respectfully submitted that the objection to the drawings has been overcome.

Regarding the objection to the claims, the claims have been amended to address the improper format. Thus, it is respectfully submitted that the objection to the claims has been overcome.

Regarding the 35 U.S.C. § 112, first paragraph, rejection, Applicant submits that Claim 1 which recites combining the filtered signals by scaling the filtered signals with a first plurality of complex coefficients in order to form an estimation (z_k) of the signal transmitted by the user is supported by the specification on pages 7-8. Pertinent sections of the specification are reproduced below:

> The receiver depicted is dedicated to the reception of symbols transmitted by a user k. The system has L antennae represented schematically by the block (400). Each of the L antenna signals is then correlated by a battery of P adapted filters, where P is the number of propagation paths of the channel, each filter being adapted to a given path i. The set of $L.P.$ adapted filters is represented diagrammatically by the block (410_k).
>
> * * *
>
> The $L.P.$ adapted filters supply the signals $x_{\ell,i,k}$, $\ell=1..L$, $i=1..P$, the signals issuing from the filters adapted to the same path i being directed to a channel former associated with this path. The P channel formers are depicted in the form of a single block (420_k). The output signals from the channel formers, $y_{i,k}$, are written:
>
> $$y_{i,k} = \sum x_{l,i,k} b_{l,i,k} \qquad (3)$$
>
> where $b_{\ell,i,k}$ are complex weighting coefficients.

Thus, in view of the present amendment and the above-noted teachings, it is respectfully submitted that the 35 U.S.C. § 112, first paragraph, rejection should be removed.

Next, Applicants acknowledge with appreciation the indication of allowable subject matter in Claims 2-7 and 9-24.

As clarified above, Claim 1 defines that the filtered signals are combined by scaling the filtered signals with a plurality of complex coefficients to form an estimate of the signal transmitted from the user. The primary reference Yoshida et al, while disclosing combining input signals with signals from the interference estimating unit, do not disclose scaling the

filtered signals with a plurality of complex coefficients to form an estimate of the signal transmitted from the user. For instance, the interference estimating units (IEU) in Yoshida et al as shown in Figure 2 thereof employ a complex conjugate means 21 which converts a propagation path estimation value received from a propagation path estimating means 20 into a complex conjugate corresponding to the current path.[1] As such, by taking a complex conjugate the imaginary parts of the signal are eliminated providing only a real component to the dispreading means. As such, it is respectfully submitted that Yoshida et al do not disclose or suggest scaling the filtered signals with a plurality of complex coefficients to form an estimate of the signal transmitted from the user, as defined in independent Claims 1 and 25.

The secondary reference of Monogioudis et al, applied for its teaching of filtering a dispreading signal,[2] has been considered but is deemed no more pertinent than Yoshida et al to the scaling of the filtered signals with a plurality of complex coefficients to form an estimate of the signal transmitted from the user. Accordingly, it is respectfully submitted that independent Claims 1 and 25 and the claims dependent therefrom patentably define over the applied references.

[1] Yoshida et al, col. 8, lines 5-8.
[2] Office Action, page 13-16.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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Attachments: Letter Submitting Replacement Drawings, Replacement Sheets

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Docket No.: 213280US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION: DAVID MOTTIER.

SERIAL NO.: 09/935,584 GAU: 2645

FILED: AUGUST 24, 2001 EXAMINER: SING, S. P.

FOR: MULTI-USER DETECTION METHOD

LETTER SUBMITTING REPLACEMENT DRAWING SHEET(S)

COMMISSIONER FOR PATENTS
Alexandria, VA 22313

SIR:

Responsive to the below indicated communication, the following drawing sheets are submitted herewith:

☒ 10 Replacement Drawing Sheets ☐ _____ New Drawing Sheets

☒ Official Action dated February 9, 2005

☐ Notice of Allowance/Issue Fee dated _____

☐ Other dated _____

The changes and/or modifications made include the following:

The label -- Prior Art -- was added to Figures 1-3; Labels were added to Figures 1-9.

Respectfully submitted,

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